### ATTACHMENT 7 SPECIAL CONDITIONS RATIONALE

### VPDES PERMIT PROGRAM LIST OF SPECIAL CONDITIONS RATIONALE

Name of Condition:

B. Boiler /Metals Cleaning Requirements (from current permit)

Rationale: In accordance with the VPDES Permit Regulation, 9 VAC 25-31-210, the Board shall establish conditions, on a case-by-case basis, to provide for and assure compliance with the Water Control Law, the clean Water Act and regulations. In addition, 9 VAC 25-31-190 Section H. allows the Board to require the permittee to furnish information to determine the effects of a discharge on the quality of State waters. It was decided, based on best professional judgment, that the submittal of boiler cleaning data can be used to determine if the effects of the discharge require a limit for copper.

C. Alternative Disinfection and Enterococci Monitoring for Outfall 206

Rationale: Required by the State Water Control Law, section 62.1-44.14 (3a) and the State's Water quality Standards (9 VAC 25-260-140). In addition, the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d) require limits necessary to meet water quality standards.

- D. OTHER REQUIREMENTS OR SPECIAL CONDITIONS
- 1.a. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

1.b. Nutrient Enriched Waters Reopener

Rationale: The Policy for Nutrient Enriched Waters, 9 VAC 25-40 -10 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future total phosphorus and total nitrogen limits may be needed.

1.c. Total Maximum Daily Load (TMDL) Reopener

Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is developed. In addition, the reopener recognizes that, in according to Section 402(o)(l) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL,

basin plan or other wasteload allocation prepared under Section 303 of the Act.

2. Licensed Operator Requirement

Rationale: The Permit Regulation, 9 VAC 25-31-200 D and Code of Virginia 54.1-2300 et. seq., Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators.

3. Operations & Maintenance (O & M) Manual

Rationale: The State Water Control Law, Section 62.1-44.21 allows requests for any information necessary to determine the effect of the discharge on State waters. Section 401 of the Clean Water Act requires the permittee to provide opportunity for the state to review the proposed operations of the facility. In addition,  $40~\rm CFR$  122.41 (e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) in order to achieve compliance with the permit (includes laboratory controls and QA/QC).

4. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for existing manufacturing, commercial mining and silvicultural discharges.

5. Ouantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per BPJ to clarify the difference between QL and MDL.

6. Compliance Reporting Under Part I.A.

<u>Rationale</u>: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

7. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.18:2, authorizes the Board to prohibit any waste discharge which would threaten public health or safety, interfere with or be incompatible with treatment works or water use. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

8. Cooling Water and Boiler Additives

Rationale: Chemical additives may be toxic or otherwise violate the receiving stream water quality standards. Upon notification, the

regional office can determine if this new additive will warrant a modification to the permit.

9. Outfall 010

Rationale: Best Professional Judgment to include clarification for interim and final limits at this outfall and to address periodic screen cleaning operations at this outfall.

10. Section 316(b) Phase II Requirements

The facility is required to be in compliance with existing 316(b) regulations. These regulations are scheduled for modification in 2012; at that time the permittee must meet any new requirements in the 316(b) regulation. The permit contains a reopener to allow the regulatory agency to modify the permit to include new 316(b) requirements once the regulation is finalized.

11. Polychlorinated Biphenyl (PCB) Compounds

<u>Rationale</u>: Federal Effluent Guidelines 40 CFR Part 423. The special condition language is as written in the previous permit.

12. Overflow of Untreated Coal Pile Runoff from a 10-Year/24-Hour Storm

Rationale: Federal Effluent Guidelines 40 CFR Part 423. The special condition language is as written in the previous permit.

13. Collected Debris for Trash Intake

<u>Rationale</u>: Best Professional Judgment to prevent collected debris on the intake trash and fish return lines from being returned to the receiving stream.

14. Mixing Zone Requirements

Rationale: Best Professional Judgment. This special condition and specific language for a mixing zone is based on an agreement between Virginia Power and the State Water Control Board. The agreement was reached some years ago and has been carried forward with this permit after review of the mixing zone boundaries and past data. The current boundaries are sufficient to protect the temperature standard at the mixing zone boundary lines.

15. Total Residual Chlorine Discharge Duration

Rationale: Federal Effluent Guidelines 40CFR Part 423.13 (b)(2).

16. Coal Unloading Dock Conditions and BMP's

Rationale: The Clean Water Act 402(p)(2)(B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The VPDES

Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where BMPs are needed to accomplish the purpose/intent of the law. These conditions set forth additional site-specific storm water best management practices to reduce or minimize the discharge of pollutants to the receiving stream. Use of these conditions is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and DEQ's general permit for storm water associated with industrial activities and is consistent with those permits.

### E. TOXICS MANAGENENT PROGRAM (TMP)

Rationale: To determine the need for pollutant specific and/or whole effluent toxicity limits as may be required by the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d). See Attachment 9 of this fact sheet for additional justification.

### F. STORM WATER MANAGEMENT CONDITIONS

1. Sampling Methodology for Specific Outfalls 010, 011, 012, 016, 017, 030

Rationale: Defines methodology for collecting representative effluent samples in conformance with applicable regulations.

2. Storm Water Management Evaluation

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

Finally, the EPA produced a document dated August 1, 1996, entitled "Interim Permitting Approach for Water Quality- Effluent Limitations in Storm Water Permits". This document indicated that an interim approach to limiting storm water could be through the use of best management practices rather than numerical limits. EPA pointed out that Section 502 of the Clean Water Act (CWA) defined "effluent limitation" to mean "any restriction on quantities, rates, and concentrations of constituents discharged from point sources. The CWA does not say that effluent limitations need be numeric." The use of BMPs falls in line with the Clean Water Act which notes the need to control these discharges to the maximum extent necessary to mitigate impacts on water quality.

### 3. General Storm Water Conditions

### a. Sample Type

Rationale: This stipulates the proper sampling methodology for qualifying rain events from regulated storm water outfalls. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

### b. Recording of Results

Rationale: This sets forth the information which must be recorded and reported for each storm event sampling (ie. date and duration event, rainfall measurement, and duration between qualifying events). It also requires the maintenance of daily rainfall logs which are to be reported. This condition is carried over from the previous storm water pollution prevention plan requirements contained in the EPA storm water baseline industrial general permit.

### c. Sampling Waiver

Rationale: This condition allows the permittee to collect substitute samples of qualifying storm events in the event of adverse climatic conditions. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

### d. Representative Discharge

Rationale: This condition allows the permittee to submit the results of sampling from one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

### e. Quarterly Visual Examination of Storm Water Quality

Rationale: This condition requires that visual examinations of storm water outfalls take place at a specified frequency and sets forth what information needs to be checked and documented. These examinations assist with the evaluation of the pollution prevention plan by providing a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

### f. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

Rationale: This condition requires that the discharge of
hazardous substances or oil from a facility be eliminated or

minimized in accordance with the facility's storm water pollution prevention plan. If there is a discharge of a material in excess of a reportable quantity, it establishes the reporting requirements in accordance with state laws and federal regulations. In addition, the pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

### g. Allowable Non-Storm Water Discharges

Rationale: The listed allowable non-storm water discharges are the same as those allowed by the EPA in their multi-sector general permit, and are the same non-storm water discharges allowed under the Virginia General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, 9 VAC 25-151-10 et seq. Allowing the same non-storm water discharges in VPDES individual permits provides consistency with other storm water permits for industrial facilities. The non-storm water discharges must meet the conditions in the permit.

### 4. Storm Water Pollution Prevention Plan

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

### 5. Facility-specific Storm Water Management Conditions

Rationale: These conditions set forth additional site-specific storm water pollution prevention plan requirements. Use of these conditions is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and DEQ's general permit for storm water associated with industrial activities and is consistent with those permits.

### ATTACHMENT 8

TOXICS MONITORING/TOXICS REDUCTION/
WET LIMIT RATIONALE

### **MEMORANDUM**

### VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard

Virginia Beach, VA 23462

SUBJECT: TMP language for Dominion Virginia Power Chesapeake Plant (VA0004081)

TO:

Melinda Woodruff

FROM:

Deanna Austin

DATE:

11/2/11

COPIES:

Dominion Virginia Power-Chesapeake Plant is located in Chesapeake, VA. There are a number of outfalls onsite that require toxicity monitoring. Outfalls 001 and 002 discharge to Deep Creek to the southern branch of the Elizabeth River. Outfalls 003, 010, 011, 012, 016, and 030 discharge to the Southern Branch of the Elizabeth River. The following table documents the discharge sources at each of the toxicity monitored outfalls during the current permit (1/07-1/12).

Outfall Number	Discharge Sources
001	Once through condenser cooling water, demineralizer regeneration waste,
	reverse osmosis wastewater, stormwater
	From the Ash Pond including boiler blowdown, floor drains, sewage, bottom
002	ash sluice landfill runoff, metals wastes, structural fill runoff/leachate, sumps,
	cooling tower blowdown, equipment wash water, coal pile runoff
	Stormwater runoff from the coal pile, fuel oil tank area, combustion turbine
003	area, and overflow from synfuel wash water, coal dock stormwater and wash
·	water
010	Stormwater runoff from areas surrounding ash silos and truck wash
	Storm water from loop (rail) track area that includes construction maintenance
011	laydown area (steel fabrication, portable diesel and gasoline storage,
011	equipment storage, lime staging, south oil storage tank and material/
	equipment/laydown)
012	Storm water runoff from dismantled diesel tank diked area and loop track area
	Storm water runoff from road providing ingress and egress for the ash silos,
016	warehouse docks, sewage treatment building, ash haul road and scales, a
	laydown area, carbon burn out operations (CBO)
020	Stormwater runoff from the coal unloading dock. (There has been no
030	discharge during this permit term)

During the last permit term outfalls 001, 002, 003, 010, 011, 012 and 016 were sampled. The data collected is presented in the tables below.

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT:	LC50	SURVIVAL	NOEC	ΤU	SAMPLETYPE	LAB
001	1st Annual Acute	A.b.	7/16/07	100	100		1	Grab	СВІ
001	1st Annual Chronic	A.b.	7/16/07		100	100	1	Grab	СВІ
001	2nd Annual Chronic	A.b.	6/16/08	are consequences of the consequences of	100	100	1	Grab	СВІ
001	2nd Annual Acute	A.b.	6/18/08	100	100		1	Grab	СВІ
001	3rd Annual Acute	A.b.	11/2/09	100	100	.,,	1	Grab	СВІ
001	3rd Annual Chronic	A.b.	11/2/09		100	100	1	Grab	СВІ
001	4th Annual Chronic	A.b.	3/22/10		100	100	1	Grab	CBI
001	4th Annual Acute	A.b.	3/24/10	100	100		1	Grab	СВІ
001	5th Annual Acute	A.b.	8/22/11	100	100	ana	1	Grab	CBI
001	5th Annual Chronic	A.b.	8/22/11		100	100	1	Grab	CBI

A.b. - Americamysis bahia

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SÜRVIVAL	NOEC	TÜ	SAMPLETYPE	LAB
002	1st Annual Chronic	A.b.	8/13/07		100	100	1	Grab	СВІ
002	1st Annual Acute	A.b.	8/15/07	100	100		1	Grab	СВІ
002	2nd Annual Chronic	A.b.	5/19/08		100	100	1	Grab	СВІ
002	2nd Annual Acute	A.b.	5/21/08	100	100		1	Grab	СВІ
002	3rd Annual Chronic	A.b.	4/20/09		100	100	1	Grab	СВІ
002	3rd Annual Acute	A.b.	4/22/09	100	100		1	Grab	СВІ
002	4th Annual Chronic	A.b.	3/22/10		100	100	1	Grab	СВІ
002	4th Annual Acute	A.b.	3/24/10	100	100		1	Grab	СВІ
002	5th Annual Acute	A.b.	8/22/11	100	100	ţ	1	Grab	СВІ
002	5th Annual Chronic	A.b.	8/22/11	i i i	100	100	1	Grab	CBI

A.b. - Americamysis bahia

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	TU	SAMPLETYPE	LAB
003	1st Annual Acute	A.b.	2/22/07	100	100	1	Grab	СВІ
003	2nd Annual Acute	A.b.	4/29/08	100	100	1	Grab	СВІ
003	3rd Annual Acute	A.b.	1/6/09	100	100	1	Grab	CBI
003	4th Annual Acute	A.b.	2/23/10	100	100	1	Grab	СВІ
003	5th Annual Acute	A.b.	1/18/11	100	100	1_	Grab	СВІ
010	1st Annual Acute	A.b.	4/12/07	100	100	1_	Grab	СВІ
010	2nd Annual Acute	A.b.	2/13/08	100	100	1	Grab	СВІ
010	3rd Annual Acute	A.b.	1/6/09	100	100	1	Grab	CBI
010	4th Annual Acute	A.b.	3/3/10	100	100	1	Grab	СВІ
010	5th Annual Acute	A.b.	3/10/11	100	100	1	Grab	СВІ
011	SW Acute	A.b.	2/2/07	100	80	1	Grab	СВІ
011	SW Acute	A.b.	2/7/08	100	90	1	Grab	СВІ

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011	SW Acute	A.b.	2/10/09	100	100	1	Grab	СВІ
011	SW Acute	A.b.	1/19/10	100	95	1	Grab	СВІ
011	SW Acute	A.b.	2/16/11	100	100	1	Grab	СВІ
OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	ΤŲ	SAMPLETYPE	LAB
012	SW Acute	A.b.	2/2/07	100	100	1	Grab	СВІ
012	SW Acute	A.b.	2/7/08	100	100	1	Grab	CBI
012	SW Acute	A.b.	2/10/09	100	100	1	Grab	CBI
012	SW Acute	A.b.	1/19/10	100	100	1	Grab	CBI
012	SW Acute	A.b.	2/16/11	100	100	1	Grab	СВІ
016	SW Acute	A.b.	3/2/07	100	85	1	Grab	СВІ
016	SW Acute	A.b.	1/17/08	100	100	1	Grab	СВІ
016	SW Acute	A.b.	1/6/09	100	100	1	Grab	СВІ
016	SW Acute	A.b.	8/18/10	100	100	1	Grab	СВІ
016	SW Acute	A.b.	3/10/11	100	100	1	Grab	СВІ

A.b. - Americamysis bahia

Outfalls 001 and 002 are recommended to have no changes from the last permit term. Samples shall be taken annually at both outfalls using acute and chronic tests for the test species, *Americamysis bahia*. The need for chronic testing at outfall 001 is due to the continuous flow at the outfall. Outfall 002 can also discharge on a continuous pattern. Both outfalls will be collected with grab samples. There have been no toxicity exceedances during the current permit term.

Outfall 003 is listed under the TMP section as it can experience process wastewater discharges from time to time. Toxicity testing shall continue at outfall 003 on an annual basis using the test species *Americamysis bahia* for acute toxicity. There have been no noted changes with the outfall that would warrant a change in toxicity monitoring.

Outfall 010 has been removed from toxicity monitoring. This outfall no longer has any process wastewater contributions. Also, there has been no toxicity exhibited at this outfall during the last two permit terms.

The stormwater management evaluation section of the reissued permit contains four outfalls: 011, 012, 016, and 030. During the current permit term outfalls 011, 012 and 016 were monitored on an annual basis for acute toxicity. Outfalls 011 and 016 have shown minor survival issues in 100% effluent. Due to the nature of the areas associated with stormwater runoff for these three outfalls, toxicity testing is still recommended. Acute toxicity monitoring with *Americamysis bahia* is required for outfalls 011, 012, and 016.

Outfall 030 was new to the permit during the last reissuance. Due to the areas that the outfall drain for stormwater discharges, toxicity monitoring was added to the permit; however, there has been no discharge during this permit term. The facility sends the discharge to outfall 002 but wants to retain the ability to discharge from outfall 030, because of this; no changes in the toxicity language for 030 will be made. Since this is still considered a new outfall (no data), both species need to be monitored annually to determine if there is a more sensitive species for this outfall. Annual acute toxicity monitoring with both *Americamysis bahia* and *Cyprinodon variegatus* is recommended.

The following toxicity language is recommended for Dominion-Chesapeake VA0004081.

### E. TOXICS MANAGEMENT PROGRAM (TMP)

### 1. Biological Monitoring

a. In accordance with the schedule in E.2.below, the permittee shall conduct annual toxicity tests for the duration of the permit.

The permittee shall collect a grab sample of final effluent from outfalls 001 and 002 in accordance with the sampling methodology in Part I.A. of this permit. The grab samples for toxicity testing shall be taken at the same time as the monitoring for the outfalls in Part 1.A. of this permit. Annual acute and chronic tests shall be conducted for outfalls 001 and 002. The tests to use are:

48 Hour Static Acute test using Americamysis bahia

Chronic Static Renewal 7-day Survival and Growth Test with Americamysis bahia

The permittee shall collect grab samples of final effluent from outfall 003 in accordance with the sampling methodology in Part I.A. of this permit. The grab samples for toxicity testing shall be taken at the same time as the monitoring for the outfalls in Part 1.A. of this permit. Annual acute tests shall be conducted for outfall 003. The acute test to use is:

48 Hour Static Acute test using Americanysis bahia

b. The acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for the calculation of a valid  $LC_{50}$ . Express the results as  $TU_a$  (Acute Toxic Units) by dividing  $100/\ LC_{50}$  for reporting.

The chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions, derived geometrically) to determine the "No Observed Effect Concentration" (NOEC) for survival and growth. Results which cannot be quantified (i.e., a "less than" NOEC value) are not acceptable, and a retest will have to be performed. Express the test NOEC as  $TU_c$  (Chronic Toxic Units), by dividing 100/NOEC for reporting. Report the LC50 at 48 hours and the IC25 with the NOEC's in the test report.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. In the event that sampling of any of the outfalls is not possible due to the absence of effluent flow during a

particular testing period, the permittee shall perform a make-up sample during the next testing period.

- d. The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of the effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.
- e. The test dilutions shall be able to determine compliance with the following endpoints:
  - (1) Acute  $LC_{50}$  of 100% equivalent to a  $TU_a$  of 1.0
  - (2) Chronic NOEC of 100% equivalent to a TUc of 1.0

### 2. Reporting Schedule

The permittee shall report the results and supply one complete copy of the toxicity test reports to the Tidewater Regional Office in accordance with the schedule below. A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, and all chains of custody. Attachment A must be submitted with each complete report. All data shall be submitted within 60 days of the sample date.

(a)	Conduct first annual TMP test for outfalls 001, 002, and 003 using Americamysis bahia	By December 31, 2012
(b)	Submit results of all biological tests	Within 60 days of the sample date and no later than January 10, 2013
(c)	Conduct subsequent annual TMP tests for outfalls 001, 002, and 003 using Americamysis bahia	By December 31, 2013, 2014, 2015 and 2016
(d)	Submit subsequent annual biological tests	Within 60 days of the sample date and no later than January 10, 2014, 2015, 2016 and 2017

### F. STORM WATER MANAGEMENT CONDITIONS

 Sampling Methodology for Specific Outfalls 010, 011, 012, 016, 017, 030

The following shall be required when obtaining samples required by Part I.A. of this permit:

- a. At the time of sampling, the permittee shall ensure that the effects of tidal influences are kept to an absolute minimum. This can be achieved by:
  - (1) Sampling at low tide and/or
  - (2) Sampling at a representative point which has been demonstrated to be free of tidal influences
- b. In the event that sampling of an outfall is not possible due to the absence of effluent flow during a particular testing period, the permittee shall provide written notification to DEQ Tidewater Regional Office with the DMR for the month following the period in which samples were to be collected.
- 2. Storm Water Management Evaluation

The Storm Water Pollution Prevention Plan (SWP3), which is to be developed and maintained in accordance with Part I.F.4 of this permit, shall have a goal of reducing pollutants discharged at all the regulated storm water outfalls.

a. Pollutant Specific Screening

The goal shall place emphasis on reducing, to the maximum extent practicable, the following screening criteria parameters in the outfalls noted below.

OUTFALL NO.

POLLUTANTS

016 and 017

Dissolved Zinc

b. Toxicity Screening

The permittee shall conduct annual acute toxicity tests on outfalls 011, 012, and 016 using grab samples of final effluent. These acute screening tests shall be 48-hour static tests using Americanysis bahia, conducted in such a manner and at sufficient dilutions for calculation of a valid LC50.

The permittee shall conduct **annual acute toxicity tests** on outfall 030 using grab samples of final effluent. The acute screening test shall be 48-hour static tests using Americamysis bahia and Cyprinodon <u>variegatus</u>,

conducted in such a manner and at sufficient dilutions for calculation of a valid LC50.

The tests shall be conducted on a calendar year basis with one copy of all results and supporting information, including Attachment A, submitted within 60 days from the date which the sample was taken and no later than January 10<sup>th</sup> of each year.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3

If any of the biological screening tests are invalidated, an additional test shall be conducted within thirty (30) days of notification. If there is no discharge during this 30-day period, a sample must be taken during the first qualifying discharge.

- c. Sampling methodology for the noted outfalls shall be in accordance with Part I.A. and Part I.F. of this permit. The permittee shall submit the following information with the results of the toxicity tests.
  - (1) The actual or estimated effluent flow at the time of the sampling.
  - (2) An estimate of the total volume of storm water discharged through each outfall during the discharge event.
  - (3) The time at which the discharge event began, the time at which the effluent was sampled, and the duration of the discharge event.
- The effectiveness of the SWP3 will be evaluated via d. the required monitoring for all parameters listed in Part I.A. of this permit for the regulated storm water outfalls, including the screening criteria parameters and toxicity screening. Monitoring results which are either above the screening criteria values or, in the case of toxicity, result in an  $LC_{50}$  of less than 100% effluent, will not indicate unacceptable values. However, those results will justify the need to reexamine the effectiveness of the SWP3 and any best management practices (BMPs) being utilized for the affected outfalls. In addition, the permittee shall amend the SWP3 whenever there is a change in the facility or its operation which materially increases the potential for activities to result in a discharge of significant amounts of pollutants.

By February 10th of each year, the permittee shall submit to the DEQ Tidewater Regional Office an annual report which includes the pollutant-specific and a

**summary** of the biological monitoring data from the outfalls included in this condition along with a summary of any steps taken to modify either the Plan or any BMPs based on the monitoring data.

The first Stormwater Management Evaluation report is due on February 10, 2013.

### ATTACHMENT A

### VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY TMP SUBMITTAL COVER SHEET

This form shall be completed for, and submitted with, each report of toxicity testing.

<del>-</del>	THIS REPORT SHALL CONTAIN THE FOLLOWING ITEMS
VPDES PERMIT NUMBER: VA0004081	COMPLETED CHAIN OF SAMPLE CUSTODY
FACILITY NAME: Virginia Power-Chesapeake	CERTIFICATE OF ANALYSIS(ES)
Energy Center	COMPLETE REPORT OF TOXICITY TESTING
FACILITY LOCATION: Vepco Street, Chesapeake,	VA 23320
OUTFALL NUMBER (circle one): 001 002	<u>003</u> <u>011</u> <u>012</u> <u>016</u> <u>030</u>
REPORTING PERIOD (ex: 2013 Annual):	
SAMPLE TYPE (circle one): Stormwater Wa	astewater
WASTEWATER SOURCE(S) (if process wastewater, p	rovide a brief source description):
SAMPLE EVENT INFORMATION (as applicable):	
Sample Date and Time of Collection:	
Time discharge began:	
Storm event measurement (inches):	
Time between sampling and last measurable storm event (hours):	
ADDITIONAL INFORMATION: If this sample is a make-up sample or a retereporting period this submittal applies to:	est, indicate which category of test and the
Report Type: (i.e., makeup, retest, etc.)	
Reporting Period:	
If the required TMP sample(s) were not colle	ected provide a reason/rationale:
· · · · · · · · · · · · · · · · · · ·	- the transfer of the transfer

### CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. \$1001 and 33 U.S.C. \$1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

ATTACHMENT 9

MATERIAL STORED

- <u>The long-term average concentration</u> was determined as the average of the monthly average concentrations.
- The long-term average mass loading was determined as the average of the monthly average loadings.

### ITEM VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

The table below shows chemicals that are either in use or may be used within the next five years. In addition to this list, CEC uses numerous chemicals to operate and maintain its equipment, vehicles, and facilities. Examples of these chemicals include lubricants, cleaners, detergents, polishes, waxes, cleaners, cutting oils, sanitizers, paints, solvents, and protectants. The majority of these chemicals are managed in small containers, but some are managed in larger quantities. It is conceivable that these chemicals and chemical types could appear in discharges from CEC at very low concentrations.

CEC occasionally uses fluorescein dye for leak detection purposes. The dye is not toxic to aquatic organisms. Dominion provide will written notice (fax, letter, or email) to DEQ prior to fluoroscein dye use so they are aware of the planned dye discharge and can adequately address any third party or citizen concerns.

					LP AUBBAT UBU
CHEMICAL	USAGE/yr	PURPOSE	ULIIMAIE PROBUCI OR FATE	OCTRAL Contraction	DATE
	~90 Tons	Regenerant for	CaSO <sub>4</sub> , MgSO <sub>4</sub> , Na <sub>2</sub> SO <sub>4</sub> ,	101*	Prior to 2007 VPDES permit
50% Sodium Hydroxide	45-60 Dry Tons	Regenerant for Demineralizer	Na <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O	101*	Prior to 2007 VPDES permit
Sodium Hydroxide	~500 lbs.	pH Control of Boiler/Steam Cycle,	Sodium Salts (Inorganic), H <sub>2</sub> O	002, 201**	Prior to 2007 VPDES permit
Calcium Hypochlorite Granular	~300 lbs.	Passivation of new metal Chlorination Agent	Ca(OH) <sub>2</sub> , On rare occasions used to chlorinate Sewer House.	206**	Prior to 2007 VPDES permit
Methoxypropylamine	1 Ton	pH Control of Condensate/Feedwater Cvcle	NH4OH, CO <sub>2</sub> , H <sub>2</sub> O	002	Prior to 2007 VPDES permit
Soda Ash (Na <sub>2</sub> CO <sub>3</sub> )	<1 Ton	pH Control, General Plant	Sodium Salts (Inorganic), CO <sub>2</sub> , H <sub>2</sub> O	003	Prior to 2007 VPDES permit
Hydrated Calcium Lime	<1-20 Tons	Acid Neutralization, Metals Pond	Inorganic Calcium Salts, Insoluble Metal Carbonates and Hydroxides	201**	Prior to 2007 VPDES permit
Trisodium Phosphates	<1 Ton	pH Control of Boiler/Steam Cycle	Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> , insoluble mono & di Calcium phosphates	002	Prior to 2007 VPDES permit
Disodium Phosphates	100 lbs.	pH Control of Boiler/Steam Cycle	Insoluble mono & di Calcium phosphates	002	Prior to 2007 VPDES permit
ALL LANDS OF THE PROPERTY OF T	25 - 30 Tons	pH Control of Reverse Osmosis Units	CaCl <sub>2</sub> , MgCl <sub>2</sub> , FeCl <sub>2</sub>	001	Prior to 2007 VPDES permit
	25 - 30 Tons	pH Control of Reverse Osmosis Units	CaCl <sub>2</sub> , MgCl <sub>2</sub> , FèCl <sub>2</sub>	001	Prior to 2007 VPDES permit
	25 - 30 Tons	pH Control of Reverse Osmosis Units	CaSO <sub>4</sub> , MgSO <sub>4</sub> , FeSO <sub>4</sub>	001	Prior to 2007 VPDES permit
	25 - 30 Tons	pH Control of Reverse Osmosis Units	CaSO <sub>4</sub> , MgSO <sub>4</sub> , FeSO <sub>4</sub>	001	Prior to 2007 VPDES permit
Sodium Metabisulfite	1 – 2 Tons	Removal of Cl. from city water to Reverse Osmosis Units	NaCl, HCl, SO <sub>4</sub>	100	Prior to 2007 VPDES permit
Flocide ® 375 Liquid Sanitizer (Biocide)	45 – 150 lbs.	Chemical Cleaning of Reverse Osmosis Units		002/101*	Prior to 2007 VPDES permit
Filtra Pure Acid Cleaner (Iron Removing Compound)	50 – 200 lbs.	Chemical Cleaning of Reverse Osmosis Units		002/101*	Prior to 2007 VPDES permit
Filtra Pure TF (Surfactant Agent)	50 - 200 lbs.	Chemical Cleaning of		002/101*	Prior to 2007

		Reverse Osmosis*			
Brine Salt		For regenerating softeners	CaCl, BaCl, MgCl	101*	Prior to 2007 VPDES permit
Hypersperse AF200UL	7000 lbs.	Antiscalant/Antifoulant for the Reverse Osmosis Units		001	Prior to 2007 VPDES permit
Hypersperse AS120	7000 lbs.	Antiscalant for the Reverse Osmosis Units		001	Prior to 2007 VPDES permit
Totaline Condenser Cleaner (Non-Acid)	2000 lbs.	Cleaning Steam/Air or Water/Air Heaters	КОН	201**	Prior to 2007 . VPDES permit
Totaline Indoor Coil Cleaner	1500 lbs.	Cleaning Steam/Air or Water/Air Heaters	Sodium Metasilicate	201**	Prior to 2007 VPDES permit
Totaline Outdoor Condenser Cleaner	300 gals.	Cleaning Steam/Air or Water/Air Heaters	HF, H3PO4	201**	Prior to 2007 VPDES permit
Cygnet Plus	10 gals.	Surfactant for plant eradication	Absorption by plants (Phragmites)	201**,003,01 1	Prior to 2007 VPDES permit
Rodeo® Emerged Aquatic Weed and Brush Herbicide	5 gals.	Plant eradication	Absorption by plants (Phragmites)	201**,003,01 1	Prior to 2007 VPDES permit
Sodium Hypochlorite	7000-8000 gals	Chlorination agent for sewer house	HOCL	200** 002	Prior to 2007 VPDES permit
Sodium Hypochlorite	364,000 gals	Biocide for Condenser and Heat Exchangers	HOCL	001	Prior to 2007 VPDES permit
Hydrazine	1 Ton	Oxygen Scavenger	Ammoniated compounds, H2O	002/001***	Prior to 2007 VPDES permit
Carbohydrazide (eliminox)	1 Ton	Oxygen Scavenger	Ammoniated compounds, H2O	002/001***	Prior to 2007 VPDES permit
Aqua Ammonia	1200 tons	NOx Control	Ammoniated water	002	Prior to 2007 VPDES permit
Anhydrous Ammonia	800 tons	NOx Control	Ammoniated water	010	Prior to 2007 VPDES permit
Urea	400 tons	NOx Control	Ammoniated compounds, proteins	005	Prior to 2007 VPDES permit
GE Betz Reckon Cycle Reagent (L1266)	30 gals.	Tracer for BCW system	MoO4	002	Prior to 2007 VPDES permit
Nalco Defoamer FG	2000 gals.	Canal defoaming agent		100	05/2007
Nalco 7468	2000 gals.	Canal defoaming agent	SiO2	001	05/2007
Nalco 71-D5	2000 gals.	Antifoaming agent	Hydrocarbon (possible light sheen)	001	05/2007

Sodium Nitrite	~200 lbs.	Passivation of new metal	Sodium salts	201**	03/2007
		in Chemical Cleaning			
		process			
Sodium Bicarbonate		Control pH at coal pile run off	Sodium salts	002, 003	Prior to 2007 VPDES permit
Aluminum Sulfate	$\sim 4800$ lbs.	Aid in coal fine settling	Aluminum salts	002,201**	03/2008
Kleen MCT403 – Acidic RO cleaner	55 - 550 lbs.	Chemical Cleaning of Reverse Osmosis Units	Acid phosphate	002,101*	06/2008
Kleen MCT411 – Alkaline RO cleaner	40 - 240 lbs.	Chemical Cleaning of Reverse Osmosis Units	Surfactant products	002,101*	06/2008
BiomateMBC881 - Biocide	50 – 150 lbs.	Chemical Cleaning of Reverse Osmosis Units	Brominated compounds	002,101*	06/2008
Hypersperse MDC150		Antiscalant for the Reverse Osmosis Units		001	06/2008
CC 016	200-400 lbs.	Chemical Cleaning of Reverse Osmosis Units	Acid Phosphate	002,101*	12/2009
CC 019	180-360 lbs.	Chemical Cleaning of Reverse Osmosis Units	Surfactant products	002,101*	12/2009
CC 103	3-11 lbs.	Chemical Cleaning of Reverse Osmosis Units	Brominated Compounds	002,101*	12/2009
BT 425	40000	Dust control coal	Dissolved in water	002, 003, 030	5/3/2010
BT-205W	10000	Dust control coal	Dissolved in waterc	002.003	5/3/2010

= approximate

Lbs. = pounds

Gals. = gallons

\* These are internal discharges that discharge to Outfall 001.

\*\* These are internal discharges that discharge to Outfall 002.

\*\*\*Could make it to Outfall 001 during startup conditions of Units.

### ITEM VII. BIOLOGICAL TOXICITY TESTING

Americamysis bahia. All toxicity tests conducted for each outfall for the period of 2008-2010 resulted in a LC50 of greater than 100. In accordance with Permit Condition Part I.E., Outfalls 001 and 002 have been tested annually for acute and chronic toxicity with Additionally, the NOEC for growth and reproduction for all tests was 100% effluent.

### ATTACHMENT 10

RECEIVING WATERS INFO./
TIER DETERMINATION/STORET DATA/
STREAM MODELING

### Planning Permit Review

Date: 9/8/2011

To: Kristie Britt, TRO

Permit Writer: Melinda Woodruff

Facility: Dominion - Chesapeake Energy Center

Permit Number: VA0004081

Issuance, Reissuance or Modification (if Modification describe): Reissuance

Permit Expiration Date: 1/23/2012

Waterbody ID (ex: VAT-G15E): VAT-G15E and VAT-G15R

Topo Name: Norfolk South

Facility Address:

2701 Vepco Street Chesapeake, VA 23320

**Receiving Stream:** Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

included in this request.	
Stream Name: See Attached Application for all	outfall and stream information
Click here to enter text.	,
Stream Data Requested? Click here to enter text.	•
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Stream Name (2): Click here to enter text.	
Click here to enter text.	
Stream Data Requested? Click here to enter text	•
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

### **Planning Review:**

303 (d): Indic	cate Outfalls which discharge direc	tly to an impaired				
	stream segment and parameters in					
Outfalls 003, 30	01, 011, 016, 017, 010, 004, 019, 020 and	1 012 discharge to impaired segment VAT-G15E_SBE02A06.				
Outfalls 001, 01	18, 013, 015, 031, 201, 206, 002, 101, 03	0 discharges to impaired segment VAT-G15E_DEC01A06. See Attachment 1.				
Tier Determi	Tier Determination					
Tier Both receiving streams are a Tier 1 water due to impairments. See Attachment 1.						
Tier						
Management Plan						
Is the facility R	eferenced in a Management Plan?	NO				
Are limits conta	ained in a Management Plan?	NO				

Review will be completed in 30 days of receipt of request.

### **Additional Comments:**

KNB 9/23/11	4	 	-	

### Dominion - Chesapeake Energy Center VA0004081 2701 Vepco Street, Chesapeake, VA Outfall and Stream Information CEDS Data 9/8/2011

Outfall	River	Water Body	Water Body Receiving Stream	Latitude	Latitude	Latitude	Longitude	Longitude	Longitude
Number	<u>≼</u> iie	yenooson	wangeuristen	(degrees)	(minutes)	(seconds)	(degrees)	(minutes)	(seconds)
001	N	VAT-G15E	Deep Creek to	36	45	45	76	፟∞.	
			Elizabeth River						
002	1.0	VAT-G15E	Deep Creek to	36	45	42	76	18	15
ě			Elizabeth River						
003	.ن	VAT-G15E	Southern Branch	36	46	23	76	18	13
			Elizabeth River						
004	.30	VAT-G15E	Southern Brach	36	46	15	76	18	0
			Elizabeth River						
010	1.0	VAT-G15R	Southern Branch	36	46	15	76	<b>1</b> ⊗	0
			Elizabeth River						
011	.35	VAT-G15R	Southern Branch	36	46	30	76	18	0
			Elizabeth River			-			
012	.24	VAT-G15R	Southern Branch	36	46	23	76	18	0
			Elizabeth River						
013	.23	VAT-G15R	Deep Creek to S	36	45	50	76	18	15
			Br Elizabeth River						

Outfall         River Number         Water Body         Receiving Stream         Latitude (degrees)         Latitude (minutes)         Latitude (degrees)         Longitude (minutes)         Longitude (minutes)         Longitude (degrees)         Longitude (minutes)         Longitude (degrees) <th>Permit No</th> <th>VA0004081</th> <th></th> <th>Municipal/ Industrial Ind</th> <th>Industrial N</th> <th>Major /Minor Ma</th> <th>Major Class</th> <th>assification Appl</th> <th>Application</th> <th></th>	Permit No	VA0004081		Municipal/ Industrial Ind	Industrial N	Major /Minor Ma	Major Class	assification Appl	Application	
Mile   Mile	Outfall	River	Water Body	Receiving Stream	Latitude	Latitude	Latitude	Longitude	Longitude	Longitude
1.3 VAT-G15R Deep Creek to S 36 Br Elizabeth River	Number	Mile	BALL CHINAL TO		(degrees)	(minutes)	(seconds)	(degrees)	(minutes)	(seconds)
1.4   VAT-G15R   Southern Branch   36   46   0   76   18     1.5   VAT-G15R   Southern Branch   36   45   57   76   18     1.6   VAT-G15R   Deep Creek to S   57   76   18     1.8   VAT-G15E   Southern Branch   36   45   50   76   18     1.8   VAT-G15E   Southern Branch   36   46   15   76   18     1.8   VAT-G15E   Southern Branch   36   46   15   76   18     1.7   VAT-G15E   Southern Branch   36   46   11   76   18     1.7   VAT-G15E   Southern Branch   36   46   11   76   18     1.7   VAT-G15E   Deep Creek to S   36   46   11   76   18     1.8   VAT-G15R   Deep Creek to S   36   46   11   76   18     1.5   VAT-G15R   Deep Creek to S   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   45   42   76   18     1.5   VAT-G15R   Southern Branch   36   45   45   45   45   45   45   45   4	015	1. 3	VAT-G15R	Deep Creek to S	36	45	57	76	18	15
1.4     VAT-G15R     Southern Branch Elizabeth River     36     46     0     76     18       1.5     VAT-G15R     Southern Branch Branch Branch G16R     36     45     57     76     18       1.6     VAT-G15R     Deep Creel to S Deep Creel to S Br Elizabeth River Elizabeth River Branch Branch Branch G18R     36     45     50     76     18       1.8     VAT-G15E     Southern Branch Elizabeth River Elizabeth River Elizabeth River Branch G12Abeth River Elizabeth River Elizabeth River Elizabeth River Branch G14A     36     46     15     76     18       1.7     VAT-G15E     Southern Branch Elizabeth River Elizabeth River Branch G14A     36     46     11     76     18       1.7     VAT-G15R     Deep Creek to S Br Elizabeth River Branch G15R Deep Creek to S Br Elizabeth River Branch G15R Deep Creek to S G15				Br Elizabeth River						
Elizabeth River	016	1.4	VAT-G15R	Southern Branch	36	46	0	76	18	0
1.5       VAT-G15R       Southern Branch       36       45       57       76       18         1.6       VAT-G15R       Deep Creel to S       36       45       50       76       18         1.6       VAT-G15R       Deep Creel to S       36       45       50       76       18         1.3       VAT-G15R       Southern Branch       36       46       15       76       18         1.8       VAT-G15E       Southern Branch       36       46       15       76       18         1.8       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S       36       46       11       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.2       VAT-G15R       Southern Branch       36       45       42       76       18         1.				Elizabeth River						
1.6	017	1.5	VAT-G15R	Southern Branch	36	45	57	76	18	0
1.6     VAT-G15R     Deep Creel to S     36     45     50     76     18       1.3     VAT-G15E     Southern Branch     36     46     15     76     18       1.8     VAT-G15E     Southern Branch     36     46     15     76     18       1.8     VAT-G15E     Southern Branch     36     46     11     76     18       1.7     VAT-G15E     Southern Branch     36     46     11     76     18       1.7     VAT-G15E     Southern Branch     36     46     11     76     18       1.7     VAT-G15E     Southern Branch     36     46     11     76     18       1.7     VAT-G15R     Deep Creek to S     36     46     11     76     18       1.4     VAT-G15R     Deep Creek to S     36     45     42     76     18       1.5     VAT-G15R     Deep Creek to S     36     45     42     76     18       1.5     VAT-G15R     Deep Creek to S     36     45     42     76     18       1.5     VAT-G15R     Deep Creek to S     36     45     42     76     18       1.2     VAT-G15R     Deep Creek to S     36 <td></td> <td></td> <td></td> <td>Elizabeth River</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				Elizabeth River						
1.3   VAT-G15E   Southern Branch   36   46   15   76   18     1.8   VAT-G15E   Southern Branch   36   46   15   76   18     1.8   VAT-G15E   Southern Branch   36   46   15   76   18     1.8   VAT-G15E   Southern Branch   36   46   11   76   18     1.7   VAT-G15E   Southern Branch   36   46   11   76   18     1.7   VAT-G15E   Southern Branch   36   46   11   76   18     1.7   VAT-G15E   Deep Creek to S   36   46   11   76   18     1.8   VAT-G15R   Deep Creek to S   36   45   42   76   18     1.5   VAT-G15R   Deep Creek to S   36   45   45   42   76   18     1.5   VAT-G15R   Deep Creek to S   36   46   46   11   76   18     1.6   VAT-G15R   Deep Creek to S   36   46   46	810	1.6	VAT-G15R	Deep Creel to S	36	45	50	76	18	15
1.3       VAT-G15E       Southern Branch Elizabeth River       36       46       15       76       18         1.8       VAT-G15E       Southern Branch Elizabeth River       36       46       15       76       18         1.8       VAT-G15E       Southern Branch Elizabeth River       36       46       11       76       18         1.7       VAT-G15E       Southern Branch Elizabeth River       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S Br Elizabeth River       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       45       42       76       18				Br Elizabeth River						
1.8   VAT-G15E   Southern Branch   36   46   15   76   18	019	1.3	VAT-G15E	Southern Branch	36	46	15	76	18	0
1.8       VAT-G15E       Southern Branch       36       46       15       76       18         1.8       VAT-G15E       Southern Branch Elizabeth River       36       46       11       76       18         1.7       VAT-G15E       Southern Branch Elizabeth River       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S Br Elizabeth River       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S Br Elizabeth River Branch Br Elizabeth River       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S Br Elizabeth River Branch Branch Br Elizabeth River Branch Greek to S Greek to S Br Elizabeth River Branch Greek to S Greek to S Br Elizabeth River Branch Greek to S Greek to S Greek to S Br Elizabeth River Branch Greek to S Greek				Elizabeth River						
1.8       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       1	020	1.8	VAT-G15E	Southern Branch	36	46	15	76	18	0
1.8       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Southern Branch of Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18				Elizabeth River						
1.7       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18	030	1.8	VAT-G15E	Southern Branch	36	46	1	76	18	<u></u>
1.7       VAT-G15E       Southern Branch       36       46       11       76       18         1.7       VAT-G15R       Deep Creek to S Br Elizabeth River       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18				Elizabeth River					and Arter	 
1.7       VAT-G15R       Deep Creek to S Br Elizabeth River       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18	031	1.7	VAT-G15E	Southern Branch	36	46	11	76	18	1
1.7       VAT-G15R       Deep Creek to S Br Elizabeth River       36       46       11       76       18         1.4       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18				Elizabeth River						
1.4       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18	101	1.7	VAT-G15R	Deep Creek to S	36	46	1	76	18	11
1.4       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18				Br Elizabeth River						
1.5       VAT-G15R       Deep Creek to S Br Elizabeth River       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18	201	1.4	VAT-G15R	Deep Creek to S	36	45	42	76	8	15
1.5       VAT-G15R       Deep Creek to S       36       45       42       76       18         1.2       VAT-G15R       Southern Branch of Elizabeth River       36       46       23       76       18				Br Elizabeth River					***************************************	
1.2         VAT-G15R         Southern Branch of Elizabeth River         46         23         76         18	206	1.5	VAT-G15R	Deep Creek to S	36	45	42	76	18	15
1.2VAT-G15RSouthern Branch3646237618of Elizabeth River010203030303				Br Elizabeth River						
of Elizabeth River	301	1.2	VAT-G15R	Southern Branch	36	46	23	76	<del>1</del> <del>0</del> 0	13
				of Elizabeth River		THE PROPERTY OF THE PROPERTY O				

### ATTACHMENT 11

303(d) LISTED SEGMENTS



### 2010 Impaired Waters - 303(d) List

Category 5 - Waters needing Total Maximum Daily Load Study

James River Basi Cause Group Code	Water Name	Cause	Estuary	Reservoir	River	Initial List	TMDL Dev.
mpaired Use	Cause	Cause	(Sq. Miles)	(Acres)	(Miles)	Date	Date
APPTF-SAV-BAY	Appomattox River						
Aquatic Life	Aquatic Plants (Macrophytes)	5A	2.705			2006	2010
Shallow-Water Submerge Aquatic Vegetation	ed Aquatic Plants (Macrophytes)	5A ,	2.705			2006	2010
EBEMH-DO-BAY	Eastern Branch Elizabeth River, Broad	Creek and Indiar	n River				
Aquatic Life	Oxygen, Dissolved	5A	2.287			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	5A	2.287			2006	2010
ELIPH-DO-BAY	Chesapeake Bay segment ELIPH (Eliza	abeth River Main					
Aquatic Life	Oxygen, Dissolved	5A	8.162			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	5A	8.162			2006	2010
G01E-01-BAC	James River						
Recreation	Escherichia coli	5A	1.466			1996	2010
	Escherichia coli	5A	2.828			2006	2010
	Escherichia coli	5A	1.964			2008	2010
G01E-02-CHLA	James River						
Aquatic Life	Chlorophyll-a	5A	5.512			2008	2010
Open-Water Aquatic Life	Chlorophyll-a	5A	5.512			2008	2010
G01E-03-PCB	James River and Various Tributaries						
Fish Consumption	PCB in Fish Tissue	5A	62.773			2002	2014
	PCB in Fish Tissue	5A	1.837			2004	2016
	PCB in Fish Tissue	5A	191.816			2006	2018
	PCB in Fish Tissue	5D			7.50	2006	2018
	PCB in Fish Tissue	5A	0.012			2008	2014
	PCB in Fish Tissue	5A	0.003			2010	2018
G01L-01-BAC	Falling Creek Reservoir				,		
Recreation	Escherichia coli	5A		88.37		2008	2020
G01L-01-PH	Falling Creek Reservoir						
Aquatic Life	рН	5C		88.37		2010	2022
G01R-01-BAC	Goode Creek						
Recreation	Escherichia coli	5A			1.25	2006	2014
G01R-02-BAC	Almond Creek						
Recreation	Escherichia coli	5A			2.36	2006	2010
G01R-02-PH	XVO and XVP (Almond Creek, UTs)						
Aquatic Life	pH	5A			0.54	2004	2016
G01R-03-BAC	Falling Creek						
Recreation	Escherichia coli	5A			3.11	2006	2014
		0,1			•		
G01R-04-BAC Recreation	Falling Creek  Escherichia coli	5A			16.99	2006	2018
G01R-04-DO	Falling Creek	5A			0.98	2008	2020
Aquatic Life	Oxygen, Dissolved	ЭA			0.30	2000	2021
Final 2010		3.3a - 14					



### 2010 Impaired Waters - 303(d) List

### Category 5 - Waters needing Total Maximum Daily Load Study

James River Bas						Initial	TMDL
Cause Group Code mpaired Use	Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	List Date	Dev. Date
314R-01-PH	Carbell Swamp - Upper						
Aquatic Life	рН	5A			2.55	2002	2014
G14R-02-BAC	Carbell Swamp - Lower						
Recreation	Escherichia coli	5A			2.86	2010	2022
314R-02-DO	Carbell Swamp - Lower						
Aquatic Life	Oxygen, Dissolved	5A			2.86	2008	2020
315E-01-01-EBEN	Elizabeth River Southern Branch, Para in SBEMH	dise, Saint Julian,	New Mill and	Deep Creek	s & unsegn	nen <b>te</b> d es	tuaries
Aquatic Life	Estuarine Bioassessments	5A	2.256			2004	2016
	Estuarine Bioassessments	5A	0.854			2006	2018
G15E-01-01-TCDD	Elizabeth River Southern Branch and it	ts tidal tributaries					
Fish Consumption	Dioxin (including 2,3,7,8-TCDD)	5A	3.137			2010	2022
G15E-02-02-BAC	Elizabeth River Upper Mainstem, Easte	ern Branch, Broad	Creek, South	nern Branch a	and Paradis	e Creek	
Recreation	Enterococcus	5A	1.979			1998	2010
	Enterococcus	5A	0.539			2006	2018
G15E-02-04-EBEN	Eastern Branch Elizabeth River, Broad	Creek and Indiar	River				
Aquatic Life	Estuarine Bioassessments	5A	1.759			2004	2016
	Estuarine Bioassessments	5A	0.586			2006	2018
G15E-02-05-BAC	Indian River tributary of Eastern Branch	h, Elizabeth River					
Recreation	Enterococcus	5A	0.268			2002	2014
G15E-03-01-EBEN	Elizabeth River Mainstem						
Aquatic Life	Estuarine Bioassessments	5A	4.528			2004	2016
	Estuarine Bioassessments	5A	3.440			2010	2022
G15E-04-01-BAC	Western Branch, Elizabeth River						
Recreation	Enterococcus	5A	2.021			2004	2016
G15E-04-02-EBEN	Western Branch Elizabeth River and U	Insegmented estu	aries in WBE	мн			
Aquatic Life	Estuarine Bioassessments	5A	0.562			2006	2018
	Estuarine Bioassessments	5A	2.166			2010	2022
G15E-05-02-BAC	Lafayette River						
Recreation	Enterococcus	5A	1.558			2002	2014
G15E-06-01-BAC	Hampton River						
Recreation	Enterococcus	5A	0.545			2010	2022
G15E-06-03-BAC	Hoffler Creek						
Recreation	Enterococcus	5A	0.057			2008	2020
H01R-01-HG	James River						
Fish Consumption	Mercury in Fish Tissue	5A			15.55	2010	2022
H02R-01-BAC	Pedlar River						
TOTAL COME	LACTOR AND COLORS						

Final 2010 3.3a - 22



### 2010 Impaired Waters - 303(d) List

### Category 5 - Waters needing Total Maximum Daily Load Study

James River Basi Cause Group Code Impaired Use	in Water Name Cause	Cause Category	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)	Initial List Date	TMDL Dev. Date
JMSPH-DO-BAY	James River CBP segment JMSPH and	d Tidal Tributaries	:				
Aquatic Life	Oxygen, Dissolved	5A	0.547			2006	2010
Open-Water Aquatic Life	Oxygen, Dissolved	5A	0.547			2006	2010
JMSTFL-DO-BAY	James River Tidal Freshwater (Lower)	Estuary					
Aquatic Life	Oxygen, Dissolved	5A	0.123			1994	2010
	Oxygen, Dissolved	5A	28.981			2006	2010
	Oxygen, Dissolved	5A	0.049			2008	2010
Open-Water Aquatic Life	Oxygen, Dissolved	5A	0.123			1994	2010
	Oxygen, Dissolved	5A	28.981			2006	2010
	Oxygen, Dissolved	5A	0.049			2008	2010
JMSTFL-SAV-BAY	James River Tidal Freshwater (Lower)	Estuary					
Aquatic Life	Aquatic Plants (Macrophytes)	5A	29.103			2006	2010
•	Aquatic Plants (Macrophytes)	5A	0.049			2008	2010
Shallow-Water Submerge Aquatic Vegetation	ed Aquatic Plants (Macrophytes)	5A	29.103			2006	2010
	Aquatic Plants (Macrophytes)	5A	0.049			2008	2010
JMSTFU-DO-BAY	James River Tidal Freshwater (Upper)	Estuary					
Aquatic Life	Oxygen, Dissolved	5A	7.773			2010	2010
Open-Water Aquatic Life	Oxygen, Dissolved	5A	7.773			2010	2010
JMSTFU-SAV-BAY	James River Tidal Freshwater (Upper)	Estuary					
Aquatic Life	Aquatic Plants (Macrophytes)	5A	7.773			2006	2010
Shallow-Water Submerga Aquatic Vegetation	ed Aquatic Plants (Macrophytes)	5A	7.773			2006	2010
LAFMH-DO-BAY	Chesapeake Bay segment LAFMH (La	afayette River)					
Aquatic Life	Oxygen, Dissolved	5A	2.163			2006	2010
Open-Water Aquatic Life	e Oxygen, Dissolved	5A	2.163			2006	2010
SBEMH-DO-BAY	Chesapeake Bay segment SBEMH (S	outhern Branch, E	Elizabeth Rive	er)			
Aquatic Life	Oxygen, Dissolved	5A	3.195			2006	2010
Deep-Water Aquatic Life		5A	2.446			2006	2010
Open-Water Aquatic Life		5A	3.195			2006	2010
WBEMH-DO-BAY	Chesapeake Bay segment WBEMH (V	Vestern Branch, E	lizabeth Rive	er)			
Aquatic Life	Oxygen, Dissolved	5A	2.817			2006	2010
Open-Water Aquatic Life	e Oxygen, Dissolved	5A	2.817			2006	2010

VA DEQ is transitioning from Fecal Coliform bacteria to Escherichia coli (fresh water) and Enterococci (salt water) for assessing the Recreation Use.

<sup>\*</sup> Multiple listings are due to the same impairments for different uses and/or different initial listing dates for adjacent waters.

### James River Basin

Cause Group Code: G01E-03-PCB

James River and Various Tributaries

Location: Estuarine James River from the fall line to the Hampton Roads Bridge Tunnel, including several tributaries listed below: Appomattox River up to Lake Chesdin Dam

Bailey Creek up to Route 630

Chickahominy River up to Walkers Dam Skiffes Creek up to Skiffes Creek Dam

Pagan River and its tributary Jones Creek

Chuckatuck Creek

Nansemond River and its tributaries Bennett Creek and Star Creek

Hampton River

Willoughby Bay and the Elizabeth R. system (Western, Eastern, and Southern Branches and Lafayette R.) and tributaries St. Julian Creek, Deep Creek,

and Broad Creek

Dinwiddie Co. Colonial Heights City Isle Of Wight Co. Chesterfield Co. Hopewell City Chesapeake City Henrico Co. City / County: Charles City Co. Hampton City

Virginia Beach City Norfolk City Suffolk City Newport News City Richmond City Prince George Co. New Kent Co.

Williamsburg City

Use(s): Fish Consumption

PCB in Fish Tissue / 5D

The Fish Consumption Use is impaired based on the VDH fish consumption advisory for PCBs fish tissue contamination within the James River and select tidal tributaries, issued 12/13/04. During the 2002 cycle, the James River from the Fall line to Queens Creek was considered not supporting of the Fish Consumption Use due to PCBs in multiple fish species at multiple DEQ monitoring locations. VA Category: PCB in Fish Tissue / 5A

During the 2004 cycle, a VDH Fish Consumption Restriction was issued from the fall line to Flowerdew Hundred and the segment was adjusted slightly to match the Restriction.

However, during the 2006 cycle, the restriction was extended on 12/13/2004 to extend from the I-95 bridge downstream to the Hampton Roads Bridge Tunnel and include the tidal portions of the following tributaries:

Appomattox River up to Lake Chesdin Dam Bailey Creek up to Route 630

Bailey Bay

Chickahominy River up to Walkers Dam Skiffes Creek up to Skiffes Creek Dam

Pagan River and its tributary Jones Creek

Chuckatuck Creek

Nansemond River and its tributaries Bennett Creek and Star Creek

Willoughby Bay and the Elizabeth R. system (Western, Eastern, and Southern Branches and Lafayette R.) and tributaries St. Julian Creek, Deep Creek, and Broad Creek

### James River Basin

The advisory was modified again on 10/10/2006 to add Poythress Run.

James River and Various Tributaries	Estuary	Reservoir	River
	(Sa. Miles)	(Acres)	(Miles)
Fish Consumption	•		
PCB in Fish Tissue - Total Impaired Size by Water Type:	256.441		7.50

Sources:

Contaminated Sediments

Source Unknown

Sources Outside State Jurisdiction or Borders

James River Basin

Cause Group Code: G15E-01-01-EBEN

Elizabeth River Southern Branch, Paradise, Saint Julian, New Mill and Deep Creeks & unsegmented estuaries in SBEMH

Location: This cause encompasses the entirety of the Southern Branch Elizabeth River, Paradise, Saint Julian, New Mill and Deep Creeks and unsegmented estuaries in SBEMH.

City / County: Chesapeake City

Norfolk City

Use(s): Aquatic Life

Cause(s) / VA Category: Estuarine Bioassessments / 5A

The Aquatic Life Use is impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis. The source/stressor tool yielded sediment contaminants as the suspected source for the impairment. This segment was previously included (2004 IR) in TMDL ID: VAT-G15E-01-09.

The TMDL due date is carried from the previous 2004 IR impairment identification date. Previous Use ID = VAT-G15E-01-09 for benthic impairment.

This Cause Code (G15E-03-01-EBEN) relates to all benthic impairments within the Elizabeth River system.

Elizabeth River Southern Branch, Paradise, Saint Julian, New Mill and Deep Creeks & unsegmented estuaries in

Estuarine Bioassessments - Total Impaired Size by Water Type:

River (Miles)

Reservoir (Acres)

Estuary (Sq. Miles)

3.110

Aquatic Life

Contaminated Sediments

Sources:

Source Unknown

James River Basin

Cause Group Code: G15E-01-01-TCDD

Elizabeth River Southern Branch and its tidal tributaries

Location: This cause encompasses the entirety of the Southern Branch Elizabeth River and its tidal tributaries. CBP segment SBEMH.

Portsmouth City

Norfolk City City / County: Chesapeake City

Use(s): Fish Consumption

Cause(s) / VA Category: Dioxin (including 2,3,7,8-TCDD) / 5A

The Fish Consumption Use is impaired based on the VDH fish consumption advisory within the Southern Branch Elizabeth River and its tidal tributaries for Dioxin in Blue Crab hepatopancreas contamination, issued by the VDH 1/23/09.

Estuary (Sq. Miles) Elizabeth River Southern Branch and its tidal tributaries

Fish Consumption

Dioxin (including 2,3,7,8-TCDD) - Total Impaired Size by Water Type:

River (Miles)

Reservoir (Acres)

3,137

Sources:

Source Unknown

James River Basin

Cause Group Code: SBEMH-DO-BAY

Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River)

Location: This cause encompasses the complete CPB segment SBEMH

Norfolk City City / County: Chesapeake City

Virginia Beach City Portsmouth City

Use(s): Aquatic Life

VA Category: Oxygen, Dissolved / 5A

Deep-Water Aquatic Life

Open-Water Aquatic Life

The Aquatic Life and Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water - Summer. The 30-day dissolved oxygen criteria for open water and deep water uses failed for the 2008 assessment. There is insufficient data to assess the remaining shorter-term dissolved oxygen criteria for these uses.

Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River) Aquatic Life Oxygen, I	Oxygen, Dissolved - Total Impaired Size by Water Type:	Estuary (Sq. Miles) 3.195	Reservoir (Acres)	River (Miles)
Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River)  Deep-Water Aquatic Life  Oxygen, I	Oxygen, Dissolved - Total Impaired Size by Water Type:	Estuary (Sq. Miles) 2.446	Reservoir (Acres)	River (Miles)
Chesapeake Bay segment SBEMH (Southern Branch, Elizabeth River) Open-Water Aquatic Life	Oxygen, Dissolved - Total Impaired Size by Water Type:	Estuary (Sq. Miles) 3.195	Reservoir (Acres)	River (Miles)

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Agriculture	Atmospheric Deposition - Nitrogen	Industrial Point Source Discharge	Internal Nutrient Recycling
Loss of Riparian Habitat	Municipal Point Source Discharges	Sources Outside State Jurisdiction or Borders	Wet Weather Discharges (Non-Point Source)
Wet Weather Discharges (Point Source and Combination of Stormwater	·		

### **VIRGINIA**

305(b)/303(d)

### WATER QUALITY INTEGRATED REPORT

to

### CONGRESS and the EPA ADMINISTRATOR

for the

### **PERIOD**

January 1, 2003 to December 31, 2008





Richmond, Virginia
November 2010

#### TMDL Permit Review

Date: 9/8/2011

To: Jennifer Howell, TRO √ JSH 9/21/2011

Permit Writer: Melinda Woodruff

Facility: Dominion - Chesapeake Energy Center

Permit Number: VA0004081

Issuance, Reissuance or Modification (if Modification describe): Reissuance

Permit Expiration Date: 1/23/2012

Waterbody ID (ex: VAT-G15E): VAT-G15E and VAT-G15R

Topo Name: Norfolk South

Facility Address:

2701 Vepco Street, Chesapeake, VA 23320

**Receiving Stream:** Attached are topographic maps showing facility property boundaries and outfall(s) locations for those included in this request.

Stream Name: See Attached Application for all	outfall and stream information
Click here to enter text.	·
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Stream Name (2): Click here to enter text.	
Click here to enter text.	
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.
Outfall #: Click here to enter text.	Lat Lon: Click here to enter text.

If greater than 2 receiving streams or 3 outfalls per stream please provide a separate table with outfall listings and Latitude Longitude description.

Is there a design flow change? If yes give the change. Click here to enter text.

#### **TMDL Review:**

# Is a TMDL IN PROGRESS for the receiving stream? Yes, PCB TMDL anticipated completion date 2014 Has a TMDL been APPROVED that includes the receiving stream? Yes – see below If yes, Include TMDL Name, Pollutant(s) and date of approval: 1) Chesapeake Bay TMDL EPA approved 12/29/2010: nitrogen, phosphorus, and TSS 2) Bacteria TMDL Development for the Elizabeth River Watershed EPA approved 7/20/2010: enterococci Is the facility assigned a WLA from the TMDL? If Yes, what is the WLA? 1) VA0004081 was listed in the Chesapeake Bay TMDL under Bay segment SBEMH as a non-significant discharger. Because

- an aggregated WLA exists, this permit did not receive an individual WLA. The aggregated WLA is presented as a delivered load for each of the impaired 92 Bay segments. (Appendix Q)
- 2) VA0004081 was listed in the Bacteria TMDL Development for the Elizabeth Watershed report (Appendix B) as a permitted facility within the watershed. No WLA was assigned to this permit.

# TMDL Permit Review

Review will be completed in 30 days of receipt of request.

Additional Comments:			
Click here to enter text.			

TABLE III(a) AND TABLE III(b) - CHANGE SHEETS

# TABLE III(a)

# VPDES PERMIT PROGRAM Permit Processing Change Sheet

Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
	Total	1/6 months to removed from	NL to removed from permit	Not a possible	11/1/11
002 and	Chromium, hex	permit		source because	
003	chromium,			Petroleum coke is	MXM
	total			not stored on site	-
	phenolics,			or will not be	-
	dissolved			stored on site	
	nickel, total			during this permit	-
	vanadium			term, per	<del></del>
				facility's request	
001 and	Total	2/Month	1/3 Months	Good compliance	2/6/12
002	Phosphorus and Nitrogen			data	MXM
030 and 031	All Parameters	1/6 months	1/Year	Good Compliance data	2/6/12 MYW

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
QLs listed in special condition for total chromium,	None	11/1/11
total phenolics, dissolved nickel, total vanadium.		MYW
Footnote [c] for Outfall 002 and footnote [e] Outfall	None	11/1/11
003 (on limits pages)		MYW
Part I.A.2 Outfalls 101, 201, 206, and 301	None. Requirements are on the final outfalls.	2/6/12
		MXM
Footnote [e] for Outfalls 003, 010, 016, 017, 030;	Add standard language regarding testing for TPH	11/1/11
Footnote [b] for Outfall 301; Footnote [d] for Outfalls 011 and 012		MXW
QL List in special conditions	Added TPH (DRO/GRO) 0.5 mg/l /0.5 mg/l, per	11/1/11
	facility's request	MXW
Footnote [b] for Outfall 011 and 012	None; Valved discharge	2/6/12
		MAM

OTHER CHANGES FROM:	CHANGED TO:	DATE &INITIAL
Footnote [a] and [b] for Outfall 003; [c] changed to	None	2/7/12
[a], [d] changed to [b] etc.		MXW
Reference to Part I.F.1 in Part I.E.1.a	Removed, no longer strictly storm water only	2/7/12
	outfall	MXW
Reference to Outfall 003 in Part 1.F.1.	Removed, not longer strictly storm water only	2/7/12
	outfall	MYW
Footnote [a] for Outfall 201	Added Sample period is 30 days, as agreed upon	11/1/11
	during site visit	MXW
Special Condition E.1. and 2. for TMP - Outfall 010	Outfall 010 removed from the requirement for the	11/1/11
required	special condition E.1 and 2. For TMP	MXW
Special Condition F.4.e 313 chemicals	Removed language regarding 313 Water Priority	2/9/12
	Chemicals and moved Requirements for Salt	MXW
	Storage from F.4.e.(2) to F.4.3.	
Special Condition F.3.f old language	Current language from permit manual, 2011	2/9/12
		MXW

TABLE III(b)

# VPDES PERMIT PROGRAM Permit Processing Change Sheet

Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes). . H

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NPDES INDUSTRIAL PERMIT RATING WORKSHEET

AND

EPA PERMIT CHECKLIST

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	10:	_0_ _4_ _0_	_8_ _1_					Score	etionary Addit e change, but r status change	
acility N	ame:							Delet	ion	
_C_ _h_	_e_ s_ a_ p_ _e_	a_[_k_]	_E_ _ne	e_ _r_ g_ _)	/_	_C_ _e_ _n_ _t_	_e_r_  _			
City: [_C	_h_e_s_a_p_	_eak_	_e		_					
Receiving	Water:  _D_ _e_ _e_	_p_  C	<u> r e </u>	e_ _k_ &_	_S_ _o	u_t_h_	BrE_	<u>    i   z  </u>	_a_ _b_ _i_ t_	_h  Rv.
Reach No	ımber:   _ _		ll_						•	
<i>with one</i> I. Pow 2. Anu	cility a steam electric or more of the follow er output 500 MW or gr clear power plant ing water discharge gr	ing charact reater (not u	eristics? sing a cool	ling pond/lake	•	Q10 flow rate	0 . ,	oulation greater is 700 (s	eater than 100,	
_x_ YES:	score is 600 (stop her	re)I	NO (contin	ue)						
FACTO	OR 1: Toxic Pol	lutant Po	otential							
PCS SIC	Code:   _	_	Primary S	SIC Code:	<u></u> _					
Other SIC	Codes:				L		<u> *    </u>	i		
ndustrial	Subcategory Code:		Code 0	00 if no subc	ategory	<i>(</i> )				
Determir	e the Toxicity potent	ial from App	endix A.	Be sure to ι	use the	TOTAL toxicity	y potential column	and check	one	
Toxicity	Group Code P	oints	Toxicity	Group C	ode	Points	Toxicity Group	Code	Points	
	orocess te streams 0 1 2	0 5 10	3. 4. 5. 6.		3 4 5 6	15 20 25 30	7. 8. 9. 10.	7 8 9 10	35 40 45 50	
								ts Factor 1	:   _	
	OR 2: Flow/Stre			I <b>C</b> (Comple	te Eith		Section B; check of a stewater and Stream		eidered	
Wastewa (See Inst Type I:	ter Type		Code 11 12 13	Points 0 10 20		estewater Type ee Instructions)	Percent of Instream Wastewater Conce tration at Receiving Stream Low Flow	n Code		
	Flow > 50 MGD		14	30	Tyj	oe I/III:	< 10%	41	0	
Type II:	Flow < 1 MGD		21	10			> 10% to < 50%	42	10	
	Flow 1 to 5 MGD Flow > 5 to 10 MGD		22 23	20 30			> 50%	43	20	
	Flow > 10 MGD		24	50	Ту	pe II:	<10%	51	0	
Type III:	Flow < 1 MGD Flow 1 to 5 MGD		31 32	0 10			> 10% to < 50%	52	20	
	Flow > 5 to 10 MGD Flow > 10 MGD	<u></u>	33 34	20 30			> 50%	53	30	
						Coe	de Checked from So	ection A or	В:	

Total Points Factor 2: |\_\_|\_|

				NF	DES No.:	_V_ _A_ _0_ _0	_ _0_ _4_	_ _0_ _8	3_ _1_
FACTOR 3: Conventiona (only when limited by the perm									
A. Oxygen Demanding Pollutar	nt: (check one) _	BOD _	COD		Other:				
Permit Limits: (check one)	< 100 lbs/d 100 to 1000 >1000 to 30 >3000 lbs/d	ay 0 lbs/day 000 lbs/day	Code F 1 2 3 4	Points 0 5 15 20					
							Code Che Points Se		<u>  </u>   _]
B. Total Suspended Solids (TSS	)								
Permit Limits: (check one)	100 to 100	lay 0 lbs/day 000 lbs/day	Code F 1 2 3 4	Points 0 5 15 20	·				
							Code Chi Points S		
C. Nitrogen Pollutant: (check on	ne) Ammonia	Othe	r:				_		
Permit Limits: (check one)	<pre> &lt; 300 lbs/c     300 to 100     &gt;1000 to 3     &gt;3000 lbs/c</pre>	lay 0 lbs/day 000 lbs/day	Code 1 1 2 3 4	Points 0 5 15 20					
							Code Ch	ecked:	<u> </u>
							Points S	cored:	<u> </u>
						Total Points I	Factor 3:		
FACTOR 4: Public He Is there a public drinking water the receiving water is a tributa ultimately get water from the a  YES (if yes, check toxicity po NO (if no, go to Factor 5)	r supply located v ry)? A public drir bove referenced :	nking water su supply.	downstre	eam of t	the effluent dis infiltration ga	scharge (this includ Alleries, or other m	des any bo ethods of c	dy of wat conveyan	er to which ce that
Determine the human heal	th toxicity note	ential from A	nnandis	, A T	se the some	SIC code and m	uhcategos	ni rafara	mce as in
Factor 1. (Be sure to use t							uocatego	ly letere	nec as m
Toxicity Group Code Po	oints .	Toxicity Group	Code	Po	ints	Toxicity Group	Code	Points	
No process     waste streams 0 1.	0 0	3. 4. 5. 6.	3 4 5 6	:	0 0 5 0	7. 8. 9.	7 8 9 10	15 20 25 30	
		45.				Code Number C	,		

NPDES No.: \_V\_A\_0\_0\_0\_4\_0\_8\_1\_1\_

FA	TOR 5: Water Quality Factors
A.	ls (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?
	Code         Points           Yes         1         10           No         2         0
B.	is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit
	Code Points Yes 1 0 No 2 5
C.	Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluen toxicity?
	Code         Points           Yes         1         10           No         2         0
	Code Number Checked: A   _   B   _   C   _
	Points Factor 5: A
FA	CTOR 6: Proximity to Near Coastal Waters
A.	Base Score: Enter flow code here (from Factor 2):         Enter the multiplication factor that corresponds to the flow code:
	Check appropriate facility HPRI Code (from PCS):
	HPRI # Code HPRI Score Flow Code Multiplication Factor
	1
	2 2 0 13, 33, or 43 0.10 14 or 34 0.15
	3 3 30 21 or 51 0.10
	22 or 52 0.30 4 4 0 23 or 53 0.60
	5 5 20 24 1.00
	HPRI code checked:
	Base Score: (HPRI Score)x (Multiplication Factor) =(TOTAL POINTS)
В.	Additional PointsNEP Program  C. Additional PointsGreat Lakes Area of Concern  for a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?  C. Additional PointsGreat Lakes Area of Concern for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)
	Code Points Code Points
	Yes
	Code Number Checked: A   B   C
	Points Factor 6: A     + B     + C   =   TOTAL

NPDES NO: \_V\_A\_0\_0\_0\_4\_0\_8\_1\_1\_

#### **SCORE SUMMARY**

	Factor	Description	Total Points
	1 2 3 4 5 6	Toxic Pollutant Potential Flow/Stream flow Volume Conventional Pollutants Public Health Impacts Water Quality Factors Proximity to Near Coastal Waters	
		TOTAL (Factors 1-6)	
		al score equal to or greater than 80?	
S2.	If the ans	wer to the above question is no, wo No Yes (add 500 points to the above s Reason:	uld you like this facility to be discretionary major?
			•
		NEW SCORE:600	
		OLD SCORE:600	
			-
			Melinda Woodruff Permit Reviewer's Name
			( <u>757</u> ) <u>518</u> - <u>2174</u> Phone Number
			October 28, 2011 Date

# State "Transmittal Checklist" to Assist in Targeting Municipal and Industrial Individual NPDES Draft Permits for Review

#### Part I. State Draft Permit Submission Checklist

Facility Name:

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Chesapeake Energy Center

•					
NPDES Permit Number:	VA0004081				
Permit Writer Name:	Melinda Woodru	uff			
Date:	October 28, 201	1.			
Major [x]	Minor[]	Industrial [χ]	Municipal [ ]		
I.A. Draft Permit Package S	Submittal Include	s:	Yes	No	N/A
1. Permit Application?			х		
Complete Draft Permit (for including boilerplate information)		ime permit – entire permit,	Х		
3. Copy of Public Notice?				Х	
4. Complete Fact Sheet?			Х		
5. A Priority Pollutant Scree	A Priority Pollutant Screening to determine parameters of concern?				
6. A Reasonable Potential a	Х				
7. Dissolved Oxygen calcul		Х			
8. Whole Effluent Toxicity T	Х				
9. Permit Rating Sheet for r			Х		
I.B. Pe	ermit/Facility (	Characteristics	Yes	No	N/A
1. Is this a new, or currently	unpermitted facilit	y?		Х	
• • • • • • • • • • • • • • • • • • •	` •	ned sewer overflow points, non- cility properly identified and	Х		
3. Does the fact sheet <b>or</b> per treatment process?	ermit contain a des	cription of the wastewater	х		
I.B. Permit	:/Facility Chara	acteristics - cont.	Yes	No	N/A
Does the review of PCS/ significant non-compliance		ast the last 3 years indicate permit?		Х	
5. Has there been any char was developed?	nge in streamflow o	characteristics since the last permit		Х	

6.	Does the permit allow the discharge of new or increased loadings of any pollutants?		Х	
7.	Does the fact sheet <b>or</b> permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8.	Does the facility discharge to a 303(d) listed water?	Χ		
	a. Has a TMDL been developed and approved by EPA for the impaired water?	Х		
	b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			х
	c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	Х		
9.	Have any limits been removed, or are any limits less stringent, than those in the current permit?		Х	
10	. Does the permit authorize discharges of storm water?	Х	-,	
11	. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		х	
12	. Are there any production-based, technology-based effluent limits in the permit?	Х		
13	Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		х	
14	. Are any WQBELs based on an interpretation of narrative criteria?	Х		
15	Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		х	
16	. Does the permit contain a compliance schedule for any limit or condition?		Х	
17	. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		×	
18	. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?			Х
19	. Is there any indication that there is significant public interest in the permit action proposed for this facility?		х	
20	. Have previous permit, application, and fact sheet been examined?	X		

#### Part II. NPDES Draft Permit Checklist

# Region III NPDES Permit Quality Checklist – for POTWs ${f NA}$

(To be completed and included in the record only for POTWs)

	II.A. Permit Cover Page/Administration	Yes	No	N/A
1.	Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2.	Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?		¥	
	II.B. Effluent Limits - General Elements	Yes	No	N/A
1.	Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?		ı	
2.	Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			
II.C	C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1.	Does the permit contain numeric limits for <u>ALL</u> of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?			
2.	Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?			
	a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?	٠		
3.	Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?			
4.	Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?			
5.	Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?			
	a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			
	II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1.	Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2.	Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			
11.1	D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
3.	Does the fact sheet provide effluent characteristics for each outfall?			ACT ACT ON THE PROPERTY OF THE

4.	Does the fact sheet document that a "reasonable potential" evaluation was performed?			
	a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
	b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
	c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?		,	
	d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			
	e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5.	Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6.	For all final WQBELs, are BOTH long-term AND short-term effluent limits established?			
7.	Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8.	Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?		,	
	II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1.	Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?			
	a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2.	Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3.	Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			
4.	Does the permit require testing for Whole Effluent Toxicity?			
	II.F. Special Conditions	Yes	No	N/A
1.	Does the permit include appropriate biosolids use/disposal requirements?			
2.	Does the permit include appropriate storm water program requirements?			
н.!	F. Special Conditions – cont.	Yes	No	N/A
3.	If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
				1 1

5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflow (SSOs) or treatment plant bypasses]?						
	Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?					
а. [	Does the permit require imp	elementation of the "Nine Minimum	Controls"?			
	b. Does the permit require development and implementation of a "Long Term Control Plan"?					
с. [	Does the permit require mo	nitoring and reporting for CSO eve	ents?			
7. Do	es the permit include appro	ppriate Pretreatment Program requ	irements?			
	II.G.	Standard Conditions		Yes	No	N/A
	pes the <b>permit</b> contain all 40 uivalent (or more stringent)	CFR 122.41 standard conditions conditions?	or the State			med distance of lines
List of	f Standard Conditions – 4	0 CFR 122.41				
Duty to Need to not Duty to Proper	o comply o reapply to halt or reduce activity a defense o mitigate r O & M t actions	Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset	Reporting Re Planned Anticipat Transfers Monitorir Complias 24-Hour Other no	change ed nond s ng repor nce sch reportin	complia ts edules g	nce
	•	dditional standard condition (or the onditions) for POTWs regarding n				And the spirit last supply to the supply to

#### Part II. NPDES Draft Permit Checklist

# Region III NPDES Permit Quality Review Checklist – For Non-Municipals (To be completed and included in the record for <u>all</u> non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
<ol> <li>Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?</li> </ol>	Х		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits - General Elements	Yes	No	N/A
Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were me any limits that are less stringent than those in the previous NPDES permits			Х

11.0	C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1.	Is the facility subject to a national effluent limitations guideline (ELG)?	Х		
	a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?	х		
	b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			Х
2.	For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	Х		
3.	Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	Х		
4.	For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?	х		
5.	Does the permit contain "tiered" limits that reflect projected increases in production or flow?		х	
	a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?	-		х
6.	Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	Х		

H.C	C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7.	Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	Х		
8.	Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		Х	

	II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1.	Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	Х		
2.	Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		Х	
3.	Does the fact sheet provide effluent characteristics for each outfall?	Х		
4.	Does the fact sheet document that a "reasonable potential" evaluation was performed?	х		
	a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	Х		
	b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	Х		
	c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	х		
	d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			х
	e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	Х		
5.	Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	x		
6.	For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	х		
7.	Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	х		
8.	Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	х		

	II.E. Monitoring and R	eporting Requirement	. <u>s</u>	Yes	No	N/A
1.	Does the permit require at least annual	monitoring for all limited	parameters?	Х		The second secon
	a. If no, does the fact sheet indicate that granted a monitoring waiver, AND, do this waiver?					
2.	<ol> <li>Does the permit identify the physical location where monitoring is to be performed for each outfall?</li> </ol>			Х		
3.	Does the permit require testing for Who the State's standard practices?	le Effluent Toxicity in acc	cordance with	Х		
	II.F. Specia	Conditions		Yes	No	N/A
1.	Does the permit require development at Management Practices (BMP) plan or s	•	Sest	Х		
	a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			Х		
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?						Х
3.	3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?					
	II.G. Standar	d Conditions		Yes	No	N/A
1.	Does the <b>permit</b> contain all 40 CFR 12 equivalent (or more stringent) condition		or the State	Х		Park States (Ashina Chairan Chair Chai
Li	st of Standard Conditions – 40 CFR 12	2.41				
Du Ne Du Pr	Duty to comply Duty to reapply Need to halt or reduce activity not a defense Duty to mitigate Proper O & M Permit actions  Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset  Reporting R Planned Anticipa Monitoring and records Transfe Signatory requirement Duty to mitigate Proper O & M Dypass Upset  Reporting R Planned Anticipa Transfe Upset Other ne				complia ts edules	nce
2.	2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal discharges regarding pollutant notification levels [40 CFR 122.42(a)]?					The second secon

#### Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name Melinda Woodruff

Title Environmental Engineer Senior

Signature November 15, 2011

CHRONOLOGY SHEET

### Attachment 14 Chronology of Events November 15, 2011

PROT	NPID VA0004081	Facility Name Dominion - Chesapeake Energy Center	Activity Reissuance	
APDUI   Resistance application due	Code	Event	Date	Comment
APRETS   App returned/Additional info requested 3rd time   na   na	APDU	Reissuance application due	07/27/2011	CLE A 134 THE BASE AND THE COMMISSION OF CLASS \$1.7 miles for commission and comm
VPDESSOD         Permit number obtained (lss)         na           DTREV         Draft reviewed	PNOT	Date of Public Notice		
DTREV         Data freviewed	APRET3	App returned/Additional info requested 3rd time		na
DTADJ         FS/SOB draft permit sent to adj. State(s)                     DTOWN1         FS/SOB draft permit sent to owner                     DTOWN2         FS/SOB draft permit sent to owner 2nd time                     DTUP         Resisuance letter mailed                     RORITC         Riparian owner request sent to tax commissioner                     ROLISTR         Riparian owner list received                     APRET4         Ap pratumed/Additional info requested 4th time                     APRET4         Ap pratumed/Additional info requested theme                     DTDDP         Draft permit developed                     DTDDPD         Draft permit developed                     DTOWNC2         Second time comments received from owner                     DTOWN         Public notice letter sent to newspaper                     PHIEAR         Public notice letter sent to messpaper                     PHED         Permit expires                     316A         316(3) Variance                     MISC         Miscellaneous         0908/2011         Application sent to planning and TMDL review           DTOEAL         FS/SOB draft permit sent to EPA/OWPS                     DTOEAL         FS/SOB draft permit sent to EPA/OWPS	VPDESNO	Permit number obtained (Iss)		na
DTOWN1         FS/SOB draft permit sent to owner         Image: Comment of the commen	DTREV	Draft reviewed		
DTOWN2         FS/SOB draft permit sent to owner 2nd time                     DTLP         Resisuance letter mailed                     RORTTC         Riparian owner request sent to tax commissioner                   na           ROLISTR         Riparian owner late received                   na           APECTA                   App complete letter sent to permittee         08/20/2011                     APECTAL                   App complete letter sent to permittee         08/20/2011                     DTDDP         Draft pormit developed         11/14/2011                               DTOWNC2         Second time comments received from owner   DTOWNC2         Second time comments received from owner	DTADJ	FS/SOB/draft permit sent to adj. State(s)		and the second s
DTLP         Reissuance letter mailed         na           RORTIC         Riparlan owner request sent to tax commissioner         na           ROLISTR         Riparlan owner request sent to tax commissioner         na           APRET4         App returned/Additional info requested 4th time         na           APCOMLET         App complete letter sent to permittee         09/20/2011           DTDDP         Drat permit developed         11/14/2011           DTC2VDH         VDH concurrence on draft permit         -           DTOWN/C2         Second time comments received from owner         -           DTNEWS         Public notice letter sent to newspaper         -           PNHEAR         Public hearing dato         -           DTSIGN         Date Permit signed         -           FLED         Permit expires         -           316A         315(a) Variance         -           MISC         Miscollaneous         09/08/2011         Application sent to planning and TMDL reviews           APRET1         App returned/Additional info requested 1st time         na         na           DTOBJ1         First time comments received from owner on draft         -         na           DTOWNA         First Sign dart permit sent to owner 3rt time         - <td< td=""><td>DTOWN1</td><td>FS/SOB draft permit sent to owner</td><td></td><td></td></td<>	DTOWN1	FS/SOB draft permit sent to owner		
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NPID VA0004	1081 Facility Name Dominion - Chesapeake Energy Center	Activity Reissua	nce
Code	Event	C. Date	Comment
LGNPERM	Local gov't notification		
SCCERTR	State Corporation certification received		na
DEPFEE	Application fee deposited		na
DTC1VDH	Comments rec'vd from State Agencies on App	09/19/2011	
DTCOE	Comments rec'vd from Federal Agencies on App		
DTPLAN	Planning concurrence on draft permit		
APRPHOCAL2	Second Application Reminder Phone Call	05/11/2011	
APRD	Application received at RO 1st time	07/05/2011	6/30/11
APRD2	Applic/Additional Info received at RO 2nd time		na
DTMIF	App sent to Fed Agencies (list in comment field)		
APCP	Application totally / technically complete	09/19/2011	
DTSITERP	Site inspection report	10/18/2011	
DTOWNC3	Third time comments received from owner		
LGNRAPP	local gov't notified of receipt of app. (lss/Mod)		na

PUBLIC PARTICIPATION

#### Woodruff, Melinda (DEQ)

From:

Woodruff, Melinda (DEQ)

Sent:

Monday, March 05, 2012 8:49 AM

To:

'Alison Vicks'

Subject:

RE: Request for Proposed Permit No. VPDES Permit for Chesapeake Energy Center

Attachments:

Dominion Chesapeake Energy Center Draft Permit VA0004081.pdf

Ms. Vicks,

I have attached per your request the draft of the proposed VPDES permit for the above mentioned facility.

Sincerely, Melinda Woodruff Water Permits DEQ TRO (757) 518-2174

From: Alison Vicks [mailto:alison.vicks@sierraclub.org]

Sent: Friday, March 02, 2012 3:37 PM

To: Woodruff, Melinda (DEQ)

Subject: Request for Proposed Permit No. VPDES Permit for Chesapeake Energy Center

Dear Ms. Woodruff,

Can you please send me an electronic copy of the proposed VPDES permit for Chesapeake Energy Center, Permit No. VPDES VA0004081?

Thank you,

Alison Vicks
Program Assistant
Sierra Club Environmental Law Program
50 F Street, NW - 8th Floor
Washington, DC 20001
P: (202) 650-6067
F: (202) 547.6009

Alison.Vicks@sierraclub.org

#### Woodruff, Melinda (DEQ)

From:

Woodruff, Melinda (DEQ)

Sent:

Wednesday, February 22, 2012 1:16 PM

To:

'wile11@cox.net'

Subject:

RE: environmental permit

Darlene and William Wile,

Thank you for your comments and concerns regarding the Public Notice for Dominion Chesapeake Energy Center's Industrial Discharge Permit. The owner is applying for the reissuance of a discharge permit. The industry is downstream from where you live, from your description in your email. This industry has been in operation at this location for over 30 years. The discharge is ninety percent non-contact cooling water and storm water from the site. This non-contact cooling water is water that has been drawn from the river, used for cooling the systems, and then put back into the river. The cooling water does not contact any process equipment, and the discharge is not sewage.

We do understand your concern with water quality and the effects of industry on the river. The Department of Environmental Quality oversees the Virginia Pollutant Discharge Elimination System program for EPA as put forth in the Clean Water Act. As regulators, we require the industry to follow the permits that are written specifically for their particular discharges that may occur from their facility. The owner is required to complete an application and is held to very specific and strict limits for its discharges in order to protect water quality. I can provide you with a copy of the proposed permit for Dominion Chesapeake Energy Center if you would like to see this. We are not involved with the City of Chesapeake's handling of the storm water drains, ponds, ditches or mosquito control.

Regarding the activities along the Elizabeth River over the past seven years, your request for information and reports may be best handled outside of this public notice. For more specific information regarding activities along the Elizabeth River please e-mail our FOIA group at trofoias@deq.virginia.gov. Please be as specific as possible in what you are looking for in order to provide you with the most up-to-date information.

Sincerely,

Melinda Woodruff Water Permits DEQ TRO (757) 518-2174

----Original Message----

From: wile11@cox.net [mailto:wile11@cox.net] Sent: Friday, February 17, 2012 12:57 PM

To: Woodruff, Melinda (DEQ) Subject: environmental permit

I wish to express my concerns about more dumping of waste water into the Southern branch of the Elizabeth River.

My name is Darlene Wile and my husband Bill and I have made numerous complaints, about storm and waste water problems we have been dealing with since we have lived at this address over the past 7 years.

Our home is located along 464 @ Barns Rd. and we discovered years ago that storm and at times sewage waste water during flash floods comes up in our backyard. After several years of complaints, The city of Chesapeake sent inmates to hand dig a ditch that city officials ignorantly call drainage and told us that will help.

Now the situation is worse. The ditch is not pitched as it should be to allow the water to flow downhill into Jones Creek at the end of our property, but now its a 500 ft. line of peaks and valleys where the water lays in ponded patches and not only is an eyesore to our home but also allows a mosquito farm almost year round.

We are so tired of begging everyone from the City of Chesapeake, the Chesapeake Bay Preservation, the DEQ, Board of Health, etc., etc., I can't even remember how many times we have asked for help. My husband has a stack of paperwork about a foot high of complaints and work orders to the public offices. It seems its all a run around. Nobody knows.

All we ever get is people coming out, looking and saying they'll get right on it. They pass it on to another dept. We wait, and wait. And wait. When each department passes off, they act like they did something to help. They did nothing.

Actually we never hear anymore after false promises, or in my book, Lies. So many times we walk out the door in the morning and the STENCH that comes from the industries across the highway can take your breath away and give you a headache. I don't care what anyone says, this can not be healthy. Then here we are again. Lets just give them permission to dump only I'm not allowed to dump anything in the river. The city God knows what else in the River. sends mosquito control on my property without my permission, trying to find a cup full of standing water in my birdbaths etc., yet its O K for them to leave mosquito infested ponds in several areas of MY property and never come back like they promise and dig theses ditches so they will run downhill and drain. If the local industries are allowed to dump more TREATED waste, what is it treated with exactly? What volatile compounds, and at what percentage do I now have ponding in my yard? When I grow vegetables in my yard what am I eating? Can you guarantee nobody in my family can possibly get cancer from the Elizabeth River soaked grounds? Worse than ever, since the city of Chesapeake put their ignorant Supervisors to the task of fixing something they are not qualified or knowledgeable to do. After all children know water runs downhill, not uphill.

Would you feel safe and be happy having all of this washed up and standing in your yard? At times when flash floods come with the rains, and the Elizabeth River plus all the storm water drains from the surrounding streets floods, even the sewage waste water has been washed up in our walking areas around our house. Is it true that as long as they (these industries) pay for a permit, that they will be allowed to just keep dumping? Do I have to try to contact someone like Erin Brockovitch? What do honest, hardworking people who pay 4,000.00 dollars a year in homeowner taxes have to do to protect themselves from being DUMPED ON by corruption and corporations? Where does it end? If the right of information act applies, I want to see the reports from the past 7 years of what and how, people are dumping in my yard by way of the Elizabeth River. I am obviously not happy and will not stand for one more, "it really is nothing just a formality because we have to publish that they are renewing a lease". Again would you want this in your yard, where your babies play? WE DON"T.

Response to this email can be made to:

Darlene and William Wile 628 Old Barnes Rd. Chesapeake, Va. 23324 757 333-3089